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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,212	02/03/2006	Declan Patrick Kelly	NL030952	9660
24737 7590 05/31/2007 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			EXAMINER AVERY, JEREMIAH L	
			ART UNIT 2131	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/567,212

Applicant(s)

KELLY ET AL.

Examiner

Jeremiah Avery

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-13 have been examined.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 6,289,455 to Kocher et al., hereinafter Kocher.

1. Regarding claim 1, Kocher discloses a reproducing apparatus (1) for reproducing content stored in encrypted form on a record carrier (2), said record carrier (2) further storing a carrier region code (RCC) indicating in which region said content shall be allowed to be reproduced and an encrypted region key (RK) for decrypting said content, comprising:

a region code storage means (10) for storing a device region code (RCD) (Figures 1 and 2, column 4, lines 1-28, "three types of memory 110: ROM 115, EEPROM 125, and RAM 120", column 9, lines 29-41, column 10, lines 36-47 and column 25, lines 5-13),  
a device key storage means (11) for storing a device key (DK), said device key (DK) being different for all regions (column 5, lines 55-67, column 6, lines 1-3, column 7, lines 65-67, "specific to a particular device", column 10, lines 36-67, column 16, lines 47-59 and column 26, lines 25-40),

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a carrier region code reading means (12) for reading said carrier region code (RCC) from said record carrier (2) (column 9, lines 29-59 and column 10, lines 36-67),

a region code check unit (13) for checking if said carrier region code (RCC) matches said device region code (RCD) (column 10, lines 36-47 and column 25, lines 5-29),

a region key reading means (14) for reading said encrypted region key (RK) from said record carrier (2) (column 9, lines 29-41, column 10, lines 36-67 and column 25, lines 5-29),

a region key decryption means (16) for decrypting said encrypted region key (RK) using said device key (DK) in case said carrier region code (RCC) matches said device region code (RCD) (Figure 11, column 4, lines 14-34, column 7, lines 55-60, column 8, lines 18-28 and 52-55, column 9, lines 37-59 and column 11, lines 33-65),

a content reading means (17) for reading said encrypted content from said record carrier (2) (column 4, lines 1-13, "access to encrypted content" and column 9, lines 7-59, "converting it into a human-readable form"),

a content decryption means (18) for decrypting said encrypted content using said decrypted region key and output means (19) for outputting said decrypted content (Figure 11, column 4, lines 14-34, column 7, lines 55-60, column 8, lines 18-28 and 52-55, column 9, lines 37-59 and column 11, lines 33-65).

2. Regarding claim 2, Kocher discloses wherein said record carrier (2) stores at least two encrypted region keys (RK) (column 10, lines 36-67, "CryptoFirewall uses several keys, which are stored in protected memory 265 and loaded during

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personalization", column 16, lines 47-67, column 17, lines 1-20, column 19, lines 51-67, column 20, lines 1-9, column 25, lines 5-13 and column 26, lines 25-40),

wherein said device key storage means (11) is adapted for storing at least two device keys (DK) (column 10, lines 35-47, column 16, lines 47-67 and column 26, lines 25-40),

wherein said reproducing apparatus (1) further comprises a key selection means (15) for selecting an encrypted region key (RK) from said at least two encrypted region keys and for selecting a device key (DK) from said at least two device keys using said carrier region code (RCC) and said device region code (RCD) (column 10, lines 36-67,

"CryptoFirewall uses several keys, which are stored in protected memory 265 and loaded during personalization", column 16, lines 47-67, column 17, lines 1-20, column 19, lines 51-67, column 20, lines 1-9, column 25, lines 5-13 and column 26, lines 25-40),

wherein said region key decryption means (16) is adapted for decrypting said selected encrypted region key using said selected device key (DK) (Figure 11, column 4, lines 14-34, column 7, lines 55-60, column 8, lines 18-28 and 52-55, column 9, lines 37-59 and column 11, lines 33-65).

3. Regarding claim 3, Kocher discloses wherein said carrier region code (RCC) comprises one or more tags (T), each tag (T) including a revocation information (P) indicating regions from which record carriers are allowed for reproduction (column 25, lines 5-13).

4. Regarding claim 9, Kocher discloses wherein said region code storage means (10), said device key storage means (11), said region code check unit (13) and said

region key decryption means (16) are embedded in separate semiconductor device (100) (column 5, lines 55-67, column 6, lines 1-3, column 7, lines 55-60, column 8, lines 22-28, column 9, lines 16-21, column 16, lines 47-67, column 21, lines 1-12, "smartcard or PCMCIA card", lines 22-45 and 55-67, "implemented in a single chip or using multiple chips enclosed in a tamper-resistant packaging" and column 22, lines 1-5).

5. Regarding claim 10, Kocher discloses a counter (30) for counting the number of times the device region code (RCD) is changed and a reset means (31) for resetting the device region code (RCD) to a default value if a predetermined number of changes has been made (column 21, lines 22-33, column 27, lines 6-14 and 57-67 and column 28, lines 1-4).

6. Regarding claim 11, Kocher discloses a reproducing method for reproducing content stored in encrypted form on a record carrier (2), said record carrier (2) further storing a carrier region code (RCC) indicating in which region said content shall be allowed to be reproduced and an encrypted region key (RK) for decrypting said content, comprising the steps of:

reading said carrier region code (RCC) from said record carrier (2) (column 9, lines 29-59 and column 10, lines 36-67),

checking if said carrier region code (RCC) matches a device region code (RCD) stored in a reproduction apparatus (1) (column 10, lines 36-47 and column 25, lines 5-29),

reading said encrypted region key (RK) from said record carrier (2) (column 9, lines 29-41, column 10, lines 36-67 and column 25, lines 5-29),

decrypting said encrypted region key (RK) using a device key (DK) stored in said reproduction apparatus (1) in case said carrier region code (RCC) matches said device region code (RCD) (Figure 11, column 4, lines 14-34, column 7, lines 55-60, column 8, lines 18-28 and 52-55, column 9, lines 37-59 and column 11, lines 33-65),

reading said encrypted content from said record carrier (2) (column 4, lines 1-13, "access to encrypted content" and column 9, lines 7-59, "converting it into a human-readable form"),

decrypting said encrypted content using said decrypted region key (RCD) and outputting said decrypted content (Figure 11, column 4, lines 14-34, column 7, lines 55-60, column 8, lines 18-28 and 52-55, column 9, lines 37-59 and column 11, lines 33-65).

7. Regarding claim 12, Kocher discloses a record carrier (2) storing content in encrypted form for reproduction by reproducing apparatus (1) (Figures 1 and 2, column 3, lines 54-61, column 4, lines 1-13, column 8, lines 1-6, column 8, lines 66 and 67, column 9, lines 1-15 and 29-41, "cryptographically modifies data written to or read from protected memory 265", column 10, lines 48-67 and column 19, lines 20-42, "the ICP stores an encrypted content decryption key in the CryptoFirewall's externally-accessible register"),

a carrier region code (RCC) indicating in which region said content shall be allowed to be reproduced and an encrypted region key (RK) for decrypting said content, wherein during reproduction said carrier region code (RCC) is used to check if said carrier region code (RCC) matches a device region code (RCD) stored in a reproduction apparatus (1) (column 10, lines 36-47 and column 25, lines 5-29),

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said encrypted region key (RK) is decrypted using a device key (DK) stored in said reproduction apparatus (1) in case said carrier region code (RCC) matches said device region code (RCD) (Figure 11, column 4, lines 14-34, column 7, lines 55-60, column 8, lines 18-28 and 52-55, column 9, lines 37-59 and column 11, lines 33-65),

said encrypted content is decrypted using said decrypted region key (Figure 11, column 4, lines 14-34, column 7, lines 55-60, column 8, lines 18-28 and 52-55, column 9, lines 37-59 and column 11, lines 33-65).

8. Regarding claim 13, Kocher discloses a computer program comprising program code means for causing a computer to perform the steps of the method as claimed in claim 11 when said computer program is executed on a computer (column 4, lines 15-27, "software includes instructions that implement and/or manage protocols and cryptographic keys involved in decrypting content").

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.



4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kocher as applied to claim 1 above, and further in view of United States Patent No. 5,907,655 to Oguro, hereinafter Oguro.

9. Kocher significantly discloses the claimed invention, as cited above. However, Kocher fails to significantly disclose the limitations found within claims 4-8. However, in combination with Oguro, said limitations are disclosed.

10. Regarding claim 4, Oguro discloses wherein said tags (T) are assigned to different nodes (N) of a tree structure representing all possible regions which are at least partly combined into region groups at a node (Figures 4 and 7, column 4, lines 14-39).

11. Regarding claim 5, Oguro discloses wherein said tree structure comprises at least two hierarchical layers (L0, L1) and wherein each node (N) has a number of branches, in particular three branches (Figures 4 and 7, column 4, lines 14-39 and column 5, lines 12-21).

12. Regarding claim 6, Kocher and Oguro disclose wherein a number of device keys (DK) are assigned to each node (N), said number comprising at least one device key (DK) for each branch of said node (N) which is not assigned to all other branches of said node (N) (*Oguro* – Figures 4 and 7, column 4, lines 14-39, *Kocher* – column 5, lines 55-67, column 6, lines 1-3, column 7, lines 65-67, “specific to a particular device”, column 10, lines 36-67, column 16, lines 47-59 and column 26, lines 25-40).

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13. Regarding claim 7, Kocher and Oguro disclose wherein said device key storage means (11) are adapted for storing only device keys (DK) assigned to nodes (N) in the chain of the hierarchical tree from the top layer (L0) to the bottom layer (L2) (*Oguro* – Figures 4 and 7, column 4, lines 14-39, *Kocher* – column 5, lines 55-67, column 6, lines 1-3, column 7, lines 65-67, “specific to a particular device”, column 10, lines 36-67, column 16, lines 47-59 and column 26, lines 25-40).

14. Regarding claim 8, Oguro discloses wherein each tag (T) includes a termination information (E) indicating if there are further tags assigned to nodes of branches, branching off from the node to which said tag (T) is assigned, in lower hierarchical layers (column 4, lines 14-39, “Although Fig. 4 shows a two-layered structure, an additional lower layer may also be provided” and column 5, lines 12-21, “an additional lower layer becomes possible by data bit assignment”).

15. The motivation to combine would be to “improve the security of systems used to distribute and protect digital content” and “for regulating access to encoded digital content” (*Kocher* – column 5, lines 55-66).

16. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teachings of Oguro within the method and apparatus of Kocher in order to “minimize the proliferation of unauthorized decoding devices” (*Kocher* – column 6, lines 50-63).

***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

18. The following United States Patents are cited to further show the state of the art with respect to the protection of digital content, such as:

United States Patent No. 6,640,305 to Kocher et al., which is cited to show a digital content protection method and apparatus.

United States Patent No. 6,304,658 to Kocher et al., which is cited to show a leak-resistant cryptographic method and apparatus.

United States Patent No. 7,003,671 to Kusakabe, et al., which is cited to show an information processing device and method.


19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremiah Avery whose telephone number is (571) 272-8627. The examiner can normally be reached on Monday thru Friday 8:30am-5pm.

20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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